

CALIFORNIA ENERGY COMMISSION

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**JOINT COMMITTEE WORKSHOP
ON THE PRELIMINARY RENEWABLE RESOURCE ASSESSMENT FOR 2005 AND 2008,
INPUT INTO THE RENEWABLE RESOURCES DEVELOPMENT REPORT
AND POTENTIAL MEASURES TO REDUCE GREENHOUSE GAS EMISSIONS THROUGH
RENEWABLE ENERGY**

June 24, 2003

Agenda - Begin at 9:30 a.m.

1. Welcome and Introduction
2. Presentation and discussion of the Draft Preliminary Renewable Resource Assessment
3. Presentation and discussion of the Renewable Resources Development Report
4. Presentation and discussion of Climate Change and potential measures to reduce GHG emissions with electricity from renewable energy.

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Topics for Discussion

Interested parties are requested to provide comments on the following topics and discussion questions and identify any other issues that the Energy Commission should consider for the Preliminary Renewable Resource Assessment, the Renewable Resource Development Report or climate change / greenhouse gas (GHG) reduction measures related to renewable energy. Public comments and technical feedback at this workshop will be instrumental in refining Energy Commission staff analysis and reporting within the PIES Assessment and appendices related to renewable energy.

I. Preliminary Renewable Resource Assessment for 2005 and 2008

SB 1038 requires the Energy Commission to complete a renewable resource plan and the California Public Utilities Commission to complete a transmission plan. Both reports must be submitted to the Legislature by December 1, 2003, but the CPUC is directed to use the renewable resource plan in preparing its transmission plan. To facilitate coordination of these tasks, the Energy Commission has agreed to prepare a preliminary renewable resource assessment for 2005 and 2008 and to deliver it to the CPUC on July 1, 2003.

The draft assessment should permit a reconnaissance level analysis of current and/or potential transmission constraints. New information may become available after July that may alter the assumptions used in the July 1 draft assessment. Any new or updated information will be included in the Renewable Resource Development Report. The Energy Commission staff will continue to collaborate with the CPUC staff after July 1, so that both the Energy Commission's renewable resource plan and the CPUC's renewable transmission plan remain as coordinated as possible as they are developing.

On January 29, 2003 the Energy Commission wrote a letter to the CPUC explaining the scope and schedule of a preliminary renewable assessment for 2005 and 2008 to be used for development of the CPUC's renewables transmission plan. This letter is contained in the February 26, 2003 Administrative Law Judge's Ruling on Development of Renewables Transmission Plan Pursuant to Senate Bill 1038 (Proceeding I.00-11-001) and states in relevant part:

The Preliminary Renewable Resource Assessment will assess a level of renewable development in 2005 and 2008 sufficient to allow Pacific Gas & Electric, Southern California Edison, San Diego Gas & Electric, and any other "obligated entities" to achieve the incremental Renewable Portfolio Standard (RPS) goals embodied in Senate Bill 1078 (Chapter 516, statutes of 2002). We will be providing an opportunity for public input into the development of this renewable resource assessment, and we welcome the comments of the CPUC, the utilities, the CAISO and renewable developers. We will publish an initial draft of the assessment by early June and request public comment on the draft.

The resource assessment will provide renewable megawatt additions for the transmission plan's target years by technology type and by renewable resource locations, e.g., Tehachapi, Salton Sea, San Geronio, Altamont, and Siskiyou County. It will also include an analysis of renewable resource potential by technology type and location, as SB 1038 requires. This analysis will provide transmission planners with some basis for developing bounding cases for renewable resource development.

Questions to consider for the workshop discussion regarding the preliminary renewable resource assessment include:

1. Do the renewable resource locations identified in the Preliminary Renewable Resource Assessment capture the most likely areas of development in 2005 and 2008? Should these locations be modified? Are there other locations that should be included?
2. How will the CEC and CPUC decisions in the RPS proceedings regarding eligibility of out of state renewable resources and Renewable Energy Credits affect the development scenarios here?
 - If out of state resources are deemed eligible for meeting the RPS, what is the likelihood of renewable development outside California for delivery into California to satisfy the RPS, and where might it occur?
 - If Renewable Energy Credits can be used to satisfy California RPS obligations without actual energy deliveries into California, how might renewable development both within and outside California differ?
3. Are the megawatt additions (e.g., quantity and technology type) for 2005 and 2008 realistic? What barriers could prevent construction of these quantities? Under what circumstances would megawatt additions exceed these projections?
4. Does the renewable resource potential by technology type and location capture current knowledge? Are there new technologies under development that will increase renewable resource potential? When will these technologies be commercialized? What barriers could delay commercialization? What circumstances could accelerate it?

5. How will market price referents and Least Cost/Best Fit policies delineated in CPUC's draft decision affect the development scenarios here?

Due to time constraints, some suggestions for modifying the Preliminary Renewable Resource Assessment may be deferred to the updates planned for the Renewable Resource Development Report.

II. Renewable Resource Development Report

SB 1038 requires the Energy Commission to prepare and submit a renewable resource assessment (Renewable Resource Development Report) to the Legislature by December 1, 2003. To facilitate coordination with the IEPR, this report will be provided by November 1, 2003 as a technical appendix to the PIES Assessment.

Expanding the proportion of electricity produced by renewable energy is expected to provide benefits to California's electricity and natural gas system by increasing the diversity, reliability, public health and environmental benefits of the energy mix. Specifically, increasing California's reliance on renewable energy resources may promote stable electricity prices, reduce reliance on imported fuels, stimulate sustainable economic development, create new employment opportunities, ameliorate air quality problems throughout the state and improve public health by reducing the burning of fossil fuels and the associated environmental impacts.

As a result of California's Renewable Portfolio Standard (RPS), the proportion of California's electricity generated by renewable resources is expected to reach 20% of retail sales by 2017 (Senate Bill 1078 [SB 1078], Sher, Chapter 516, Statutes of 2002). Furthermore, in the Draft Energy Action Plan the state's energy agencies encourage efforts to increase the proportion of California's retail electricity sales produced by renewable resources to 20% by 2010.

Transition to this vision of the state's electricity system may face the following challenges.

- Improving the economic viability of new renewable electricity generation facilities.
- Addressing the operational compatibility of renewable resources with the existing electricity system
- Incorporating renewable resources into the electricity system through long-term commitments considering future demand.
- Obtaining financing for new, renewable generation.
- Expanding the transmission system to accommodate development of renewable energy resources.
- Identifying activities undertaken by municipal utilities, direct service providers, and community choice aggregators to develop renewable resources.

The Energy Commission requests input from the public regarding the benefits and barriers to integration of renewable resources within the electricity system. Questions to consider for the discussion include:

1. To what extent have renewable technologies been incorporated into state and local security plans and structures? What are the benefits and barriers to expanding this application of renewable energy?
2. What could be done to increase the contribution of renewable energy toward mitigating the effects of energy price volatility and the potential for price shocks? Which mitigation measures using renewable energy provide the best balance between benefits, cost, economic efficiency, and equity?
3. What are the impacts of renewable energy on the state's electricity and natural gas system in relation to the provision of reliable, affordable energy?
4. What are the environmental impacts and public health effects of a major increase in renewable electricity generation technologies?
5. Is there any research and development currently being conducted related to renewable energy that looks promising for the near term? Longer term? Are there areas of research needed to further develop the renewable energy market? What are these research needs?

III. Potential Measures to Reduce GHG Emissions with Electricity from Renewable Energy

Potential measures to reduce GHG emissions through renewable energy includes a number of action items that would build upon the Renewable Portfolio Standard and other considerable efforts already launched by the state to develop and utilize renewable electricity. Public comments on draft action items related to renewable electricity resources will be used to obtain public input on a range of potential actions, identify new or additional actions, and assist in the identification of actions that should be the focus of further evaluation efforts.

California's efforts to shift from fossil fuel sources of energy to renewable sources is in part driven by a desire to reduce the state's contribution to rising atmospheric concentrations of greenhouse gases. The Earth is warming faster than any time in the previous 1,000 years and the potential adverse consequences of climate changes in California could be varied and large in magnitude. Several new or expanded measures the state might consider in its efforts to reduce GHG emissions resulting from electricity generation are listed below. Global markets are emerging for the sale and purchase of GHG reductions that result from renewable sources of energy. Opportunities exist for California companies to participate in global efforts to develop low-GHG emission sources of power generation.

While California has demonstrated a strong commitment to increasing the use of renewable resources to generate electricity, more can be done to support the efficient development and use of electricity from renewable energy resources. As implementation of the Renewable Portfolio Standard moves forward, a number of additional actions could be proposed to further reduce GHG emissions with renewable energy for electricity generation. Examples of potential measures include:

1. Reduce fuel costs at biomass power plants by accounting for the costs of alternative disposal of the fuels (e.g., open-field burning).

An interagency task-force of relevant agencies, such as the CIWMB, Forestry, CARB and AQMDs, and others should be constituted to reexamine methods of reducing fuel costs and volatility of costs at biomass facilities. Potential measures to consider include:

- Establish air-quality credits for avoiding open-field burning in central valley farms.
- Enact feebates or tax-credits for construction and logging industries to foster delivery of waste product to biomass facilities.
- Identify a range of measures that would lead to increased delivery of waste product to biomass facilities in forest management plans.

2. Increase purchases of renewable energy by state and local governments

Increasing the demand for renewable energy has been difficult in the face of the electricity crisis. Nonetheless, state and local governments as consumers can increase their demand for renewable energy in their electricity purchases and other policies. They can also encourage other institutions to allow consumer preference for renewable energy to act on the market. Specific actions include:

- Expanding green pricing programs run by municipal utilities
- Promoting new customer aggregations and community wind development
- Identify measures that will increase government purchases of renewable energy
- Incorporating renewable technologies into state and local security plans and structures.

3. Increase opportunities for renewable distributed generation and agricultural use of renewable energy.

Several state and local programs already provide significant incentives for installing renewable distributed generation, such as PV and small wind turbines. The California Energy Commission's Emerging Renewables Program and the California Public Utilities Commission's Self-Generation Incentive Program are the largest

examples. Some municipal governments and utilities have local programs of similar nature. Nevertheless, additional actions are needed to continue to grow this vital industry in California. These actions include:

- Providing technical and financial assistance to agricultural producers and processors to shift their energy sources to renewable sources such as biofuels, photovoltaics, solar thermal, and wind.
- Establishing continued funding beyond 2004 for the Self-Generation Incentive Program.
- Develop incentives for food processors and other industries with significant organic wastes to use digester gas self-generation.
- Continue to remove barriers to renewable self-generation from local codes and interconnection requirements.
- Incorporate, as appropriate per PRC section 25402, renewable distributed generation technologies in energy standards for new building construction.
- Expand net metering to include broader biogas generation opportunities.

Questions to consider for the workshop discussion on this topic include:

1. Is this an appropriate mix of actions to reduce greenhouse gas emissions through an increase in demand for renewable electricity in California? What barriers might be encountered in the implementation of such actions? What could be done to address these barriers?
2. What other actions related to renewable electricity would further reduce greenhouse gas emissions in California?
3. What types of measures would lead to increased purchases of electricity from renewable resources by state and local governments?
4. What actions can the state take to ensure that renewable resources result in the most significant greenhouse gas reductions possible, taking into consideration other important objectives related to electricity generation?